



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,343	09/28/2001	Axel Knauff	KNAUFF	3125

7590 11/21/2002
Henry M. Feiereisen
Suite 3220
350 Fifth Avenue
New York, NY 10118

EXAMINER

LAM, THANH

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/966,343

Applicant(s)
Knauff

Examiner
Thanh Lam

Art Unit
2834



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 11, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above, claim(s) 3-5, 7, 8, 11, 14, 18-21, 24, 27, and 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 9, 10, 12, 13, 15-17, 22, 23, 25, 26, and 28-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit: 2834

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2,6,9-10,12-13,15-17,22-23,25-26,28-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Gamble et al.

Gamble et al. disclose (figs. 1-7) an electric machine, comprising: a shaft; a rotor; means for excitation (30) of at least portions of the rotor; means for torque (70) pickup upon the rotor; means for force transfer between the rotor and the shaft; and a web structure (see marked in red ink of the attached fig. 7) between the means for torque pickup and the means for force transfer while effecting an inertial mass relief of the rotor.

Art Unit: 2834

Regarding claim 2, Gamble et al. disclose the electric machine of claim 1, wherein the web structure has at least one web configured as secant.

Regarding claim 6, Gamble et al. disclose in the form of a permanently excited synchronous machine.

Regarding claim 9, Gamble et al. disclose the means for force transfer between the rotor and the shaft includes at least one connection selected from the group consisting of positive engagement, non-positive engagement, and material-based joint.

Regarding claim 10, Gamble et al. disclose the web structure is configured to have a honeycomb pattern.

Regarding claim 12, Gamble et al. disclose the honeycomb pattern of the web structure is made rigid.

Regarding claim 13, Gamble et al. disclose the honeycomb pattern of the web structure is made flexible.

Regarding claim 15, Gamble et al. disclose the rotor is made of at least two materials.

Regarding claim 16, Gamble et al. disclose an electric machine, comprising: a rotor; a shaft centered interiorly of the rotor; an excitation structure for generating a torque; a torque receiving structure for picking up the torque from the excitation structure and imparting the torque onto the rotor; and a connection structure for providing a fixed rotative engagement between the rotor and the shaft; wherein the rotor includes a web structure extending inwardly from the torque receiving structure to the shaft and effecting an inertial mass relief of the rotor.

Art Unit: 2834

Regarding claim 17, Gamble et al. disclose the web structure has at least one web configured as secant.

Regarding claim 22, Gamble et al. disclose the connection structure includes at least one connection selected from the group consisting of positive engagement, non-positive engagement, and material-based joint.

Regarding claim 23, Gamble et al. disclose the web structure is configured to have a honeycomb pattern.

Regarding claim 25, Gamble et al. disclose the honeycomb pattern of the web structure is made rigid.

Regarding claim 26, Gamble et al. disclose the honeycomb pattern of the web structure is made flexible.

Regarding claim 28, Gamble et al. disclose the rotor is made of at least two materials.

Regarding claim 29, Gamble et al. disclose the web structure includes a polygonal ring embracing the shaft and a plurality of webs extending between the torque receiving structure and the polygonal ring.

Regarding claim 30, Gamble et al. disclose the positive engagement includes a fitting key assembly, including a key received in aligned grooves of the web structure and the shaft.

Regarding claim 31, Gamble et al. disclose the non-positive engagement includes shrinking of the rotor onto the shaft.

Art Unit: 2834

Regarding claim 32, Gamble et al. disclose the material-based joint includes a process selected from the group consisting of gluing and welding for connecting the rotor to the shaft.

Regarding claim 33, Gamble et al. disclose a rotor adapted for use in an electric machine, comprising a body portion having an outer annulus and a web structure configured to effect an inertial mass relief of the main body, wherein the web structure extends inwardly from the annulus and forms a bore for receiving a shaft; and an excitation structure operatively connected to the annulus for imparting a torque on the body portion.

Regarding claim 34, Gamble et al. disclose the web structure includes a plurality of webs so crisscrossing the body portion as to define a plurality of relief zones.

Regarding claim 35, Gamble et al. disclose the webs are arcuate.

Regarding claim 36, Gamble et al. disclose the excitation structure includes an element connected to the annulus and selected from the group consisting of permanent magnet and an electric conductor.

Regarding claim 37, Gamble et al. disclose the webs exhibit a honeycomb pattern.

4. Claims 1-2,6,9-10,12-13,15-17,22-23,25-26,28-37 are rejected under 35 U.S.C. 102(b) as being anticipated by McClelland.

McClelland discloses an electric machine, comprising: a shaft (120) ; a rotor(100); means for excitation of at least portions of the rotor; means (110) for torque pickup upon the rotor; means (135) for force transfer between the rotor and the shaft; and a web (135) structure

Art Unit: 2834

between the means for torque pickup and the means for force transfer while effecting an inertial mass relief of the rotor.

Regarding claim 2, McClelland discloses the electric machine of claim 1, wherein the web structure has at least one web configured as secant (A,B).

Regarding claim 6, McClelland discloses in the form of a permanently excited synchronous machine.

Regarding claim 9, McClelland discloses the means for force transfer between the rotor and the shaft includes at least one connection selected from the group consisting of positive engagement, non-positive engagement, and material-based joint.

Regarding claim 10, McClelland discloses the web structure is configured to have a honeycomb pattern.

Regarding claim 12, McClelland discloses the honeycomb pattern of the web structure is made rigid.

Regarding claim 13, McClelland discloses the honeycomb pattern of the web structure is made flexible.

Regarding claim 15, McClelland discloses the rotor is made of at least two materials.

Regarding claim 16, McClelland discloses an electric machine, comprising: a rotor; a shaft centered interiorly of the rotor; an excitation structure for generating a torque; a torque receiving structure for picking up the torque from the excitation structure and imparting the torque onto the rotor; and a connection structure (180) for providing a fixed rotative engagement

Art Unit: 2834

between the rotor and the shaft; wherein the rotor includes a web structure extending inwardly from the torque receiving structure to the shaft and effecting an inertial mass relief of the rotor.

Regarding claim 17, McClelland discloses the web structure has at least one web configured as secant.

Regarding claim 22, McClelland discloses the connection structure includes at least one connection selected from the group consisting of positive engagement, non-positive engagement, and material-based joint.

Regarding claim 23, McClelland discloses the web structure is configured to have a honeycomb pattern.

Regarding claim 25, McClelland discloses the honeycomb pattern of the web structure is made rigid.

Regarding claim 26, McClelland discloses the honeycomb pattern of the web structure is made flexible.

Regarding claim 28, McClelland discloses the rotor is made of at least two materials.

Regarding claim 29, McClelland discloses the web structure includes a polygonal ring embracing the shaft and a plurality of webs extending between the torque receiving structure and the polygonal ring.

Regarding claim 30, McClelland discloses the positive engagement includes a fitting key assembly, including a key received in aligned grooves of the web structure and the shaft.

Art Unit: 2834

Regarding claim 31, McClelland discloses the non-positive engagement includes shrinking of the rotor onto the shaft.

Regarding claim 32, McClelland discloses the material-based joint includes a process selected from the group consisting of gluing and welding for connecting the rotor to the shaft.

Regarding claim 33, McClelland discloses a rotor adapted for use in an electric machine, comprising a body portion having an outer annulus (110) and a web structure (135) configured to effect an inertial mass relief of the main body, wherein the web structure extends inwardly from the annulus and forms a bore for receiving a shaft (120) ; and an excitation structure operatively connected to the annulus for imparting a torque on the body portion.

Regarding claim 34, McClelland discloses the web structure includes a plurality of webs so crisscrossing the body portion as to define a plurality of relief zones.

Regarding claim 35, McClelland discloses the webs are arcuate.

Regarding claim 36, McClelland discloses the excitation structure includes an element connected to the annulus and selected from the group consisting of permanent magnet and an electric conductor.

Regarding claim 37, McClelland discloses the webs exhibit a honeycomb pattern.

Art Unit: 2834

Election/Restriction

5. Claims 3-5,7-8,11,14,18-21,24,27, and 38 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected specis, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (703) 308-7626. The fax phone number for this Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0656.



Thanh Lam

Patent Examiner